

Appl. No. 10/718,881
Amdt Dated 12/23/2005
Response to Office Action of 10/26/2005

Attorney Docket No.: TS03-431
N1085-90172

REMARKS/ARGUMENTS

Claims 1-28 were previously pending in this Application. Claims 1, 2 and 4-23 are allowed, claim 26 objected to, and claims 24, 25, 27 and 28 rejected. Claims 4, 12, 22 and 24 are hereby amended. Applicants respectfully request re-examination and reconsideration of claims 24-28 and allowance of each of presently pending claims 1, 2 and 4-28.

I. Claim Objections

In the Office Action, specifically on page 2, second paragraph, claims 4, 12 and 22 were each objected-to due to informalities. Each of claims 4, 12 and 22 has been corrected, via amendment, as suggested by the Examiner. The objection to claims 4, 12 and 22 should therefore be withdrawn.

II. Allowable Subject Matter

Applicants thank the Examiner for indicating, on Page 5 of the Office Action, that claims 1, 2 and 4-23 are allowed. Applicants respectfully point out that claims 4, 12 and 22 have been amended to overcome objections, as above.

Applicants also thank the Examiner for indicating that claim 26 would be allowable if rewritten to include the limitation of base claim 24.

III. Claim Rejections Under 35 U.S.C. § 103

On Page 3, first paragraph, of the Office Action, claims 24, 25, 27 and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Islam et al. (USPN 6,174,810), hereinafter "Islam" in view of Wolf, et al. (Silicon Processing for the VLSI Era, Vol. 1, pages 182-195, 551, 581-582), "Wolf". Applicants respectfully submit that these claim rejections are overcome for reasons set forth below.

Claim 24 has been amended to more particularly point out distinguishing features of Applicants' invention and Applicants respectfully submit that, as amended, claim 24 now explicitly states that which was inherent in previously pending claim 24. Amended

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independent claim 24 recites the features of "the conductive region directly on and contacting the semiconductor substrate" and "the insulator layer directly on and contacting the tri-layer insulator", such features not taught in Islam or Wolf. Claim 24 has been amended to more particularly point out distinguishing features of Applicant's invention and Applicant's respectfully submit that, as amended, claim 24 now explicitly states that which was inherent in previously pending claim 24.

Islam, as shown in FIGS. 1-6, does not teach conductive region 38 directly on and contacting semiconductor substrate 10 and it does not teach forming insulator layer 46 directly on and contacting the tri-layer insulator composite. In Islam, the conductive region 38 is clearly spaced from and not on semiconductor substrate 10, much less directly on and contacting semiconductor substrate 10: there are several layers interposed between the conductive region 38 and the substrate 10. In Islam, the tri-layers attributed to be the tri-layer insulator composite by the Examiner are layers 40/41/42. Islam does not teach forming insulator layer 46 on the this tri-layer insulator composite, much less directly on and contacting the tri-layer insulator composite. Rather, layer 46, alleged by the Examiner to be the insulator layer, is interposed between the tri-layer insulator composite and the insulator 46. Layer 46 is clearly formed on etch stop layer 44, not the tri-layer insulator composite. The Islam structure bears little resemblance to the invention as claimed in amended independent claim 24. Claim 24 therefore includes structural limitations that distinguish Applicants' invention from Islam.

As such, the Examiner's comments in *Response to Arguments* on page 6, first paragraph of the subject Office action, are therefore obviated.

Amended independent claim 24 is further distinguished from Islam because Islam does not teach or suggest a tri-layer insulator composite formed of an underlying silicon rich-silicon oxide layer, a hydro-silicon oxynitride (SiO_xNH) layer, and an overlying silicon nitride layer.

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Wolf has apparently been relied upon for teaching forming a hydro-silicon oxynitride and for anisotropically etching. Wolf does not provide a particular location for the hydro-silicon oxynitride film and therefore does not make up for the above-stated deficiencies of Islam. Claim 24 is therefore distinguished from Islam in view of Wolf.

- 5 Claim 24, and therefore claims 25-28 which depend from claim 24, are therefore distinguished from the references of Islam and Wolf, taken alone or in combination. Therefore the rejection of claims 24-25 and 27-28 under 35 U.S.C. § 103(a) as being unpatentable over Islam in view of Wolf, should be withdrawn.


CONCLUSION

- 10 Based on the foregoing, each of Claims 1-2 and 4-28 is in allowable form and the application therefore in condition for allowance, which action is respectfully and expeditiously requested.

- The Assistant Commissioner for Patents is hereby authorized to charge any additional fees or credit any excess payment that may be associated with this
15 communication to deposit account 04-1679.

Respectfully submitted,

20 Dated: 23 Dec 2005


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